<u>WHAT IS CLAIMED IS</u>:

1. A test fixture assembly for testing a printed circuit board comprising:

a fixture including a first interface having a plurality of interface terminals adapted to electrically couple the fixture to a test device and a second interface having a plurality of interface terminals adapted to electrically couple the fixture to terminals on the printed circuit board and the plurality of interface terminals on the second interface being electrically coupled to the plurality of interface terminals on the first interface;

a clamp assembly adapted to selectively secure the fixture relative to a support member; and

an actuator operably coupled to the support member to move the fixture between a first position to support the fixture at a position spaced from the test device and a second position to install the fixture relative to the test device to provide an electrical connection between the interface terminals on the fixture and the test device.

2. The test fixture assembly of claim 1 and further comprising a rotator coupled to the clamp assembly to rotate the clamp assembly between a first orientation to load the test fixture and a second orientation to clamp the test fixture for installation.

3. The test fixture assembly of claim 1 wherein the clamp assembly includes first and second clamp members having opposed clamp surfaces to secure the fixture therebetween and one of said clamp members forms the support member to load the test fixture for installation.

4. The test fixture assembly of claim 3 wherein the fixture includes an elongated clamp opening having an elongated dimension and a narrower

dimension and the other of said clamp members includes a head having an elongated dimension and narrower dimension and the head is sized for insertion through the clamp opening in a first orientation with the elongated dimension of the head aligned with the elongated dimension of the clamp opening and the other of said clamp member being rotatable to a second orientation to align the elongated dimension of the head with the narrower dimension of the clamp opening to clamp the fixture relative to the one of said clamp members which forms the support member for installation.

5. The test fixture assembly of claim 1 and further including a cover including interface terminals electrically coupleable to the circuit board terminals for testing.

6. The test fixture of claim 1 wherein the fixture includes guide holes for insertion of guide pins on the test device or a cover.

7. The test fixture assembly of claim 1 wherein the first interface is orientated in a first direction and the second interface is orientated in a second opposed direction from the first direction.

8. The test fixture assembly of claim 1 wherein the actuator is a piston-cylinder actuator.

9. The test fixture assembly of claim 8 wherein the piston-cylinder actuator is pneumatically operated.

10. The test fixture assembly of claim 1 and comprising at least four clamp assemblies coupleable to at least four clamp openings on the fixture.

11. A test assembly comprising:

a fixture including a first interface having a plurality of interface terminals adapted to electrically to couple the fixture to a test engine and a second interface having a plurality of interface terminals adapted to electrically couple the fixture to terminals on a printed circuit board and the plurality of interface terminals on the first interface being electrically coupled to the plurality of interface terminals on the second interface; and

means for removably installing the fixture to the test engine to provide an electrical connection between the interface terminals on the first interface and the test engine.

12. The test assembly of claim 11 wherein the means for removably installing includes a clamp assembly including opposed clamp members, of said clamp members forming a support surface to load a fixture for installation and the other of said clamp members being positionable between a load position and a clamped position to clamp the fixture to a test engine.

13. The test assembly of claim 12 wherein the clamp assembly is coupled to an actuator movable between a first position spaced from the test engine to load the fixture on the support surface and a second position proximate to the test engine to provide an electrical connection between the fixture and the test engine to install the fixture.

14. A method for testing circuit boards comprising steps of:

clamping a fixture having a first interface having a plurality of interface terminals and a second interface having a plurality of interface terminals electrically coupled to the plurality of interface terminals on the first interface to an actuator assembly; and

operating the actuator assembly to move the fixture from a first position spaced from a test device to a second position so that the terminals of the first interface electrically interface with terminals on the test device for use.

15. The method of claim 14 wherein the step of clamping the fixture comprising:

loading the fixture onto a support surface coupled to the actuator assembly and clamping the fixture relative to the support surface.

16. The method of claim 15 wherein the step of clamping the fixture relative to the support surface comprises rotating a clamp member from a first orientation to a second orientation.

17. The method of claim 15 and further comprising the steps of:

sequentially coupling a plurality of circuit boards relative to the plurality of interface terminals on the second interface; and

sequentially testing operation of the plurality of circuit boards.

18. The method of claim 14 and further comprising the steps of:

operating the actuator assembly to retract the fixture from the test device;

unclamping the fixture from the actuator assembly; and

removing the fixture and installing a different fixture relative to the test device.

19. The method of claim 14 and further comprising the steps of:

positioning a circuit board between the fixture and a cover having interface terminals; and

moving the cover to electrically connect the circuit board to the interface terminals on the fixture and the cover.

20. A test device comprising:
a test circuit adapted to electrically test a particular circuit board; and
means for operably engaging the test circuit against the circuit board.

21. The test device of claim 20 wherein the test circuit includes a fixture operably movable between a retracted position, and an installed position where the circuit board is tested.

22. The test device of claim 21 wherein the test circuit further comprises a cover wherein both sides of the circuit board are electrically engageable.